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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,653	03/17/2004	John Larry Sanders	30621-DIV1-CIP1	2652
23589	7590	09/27/2005	EXAMINER	
HOVEY WILLIAMS LLP 2405 GRAND BLVD., SUITE 400 KANSAS CITY, MO 64108			PEZZUTO, HELEN LEE	
			ART UNIT	PAPER NUMBER

1713

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/708,653

Applicant(s)

SANDERS ET AL.

Examiner

Helen L. Pezzuto

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 12-22, 35 and 36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 23-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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**DETAILED ACTION**

***Election/Restrictions***

1. This application contains claims 12-22, and 35-36 drawn to an invention nonelected without traverse in response filed on 3/9/05. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

***Response to Amendment***

Applicant's amendment to claims 1, 9, 19, 26, in conjunction with the submission of new drawings, 131 Declarations, and Terminal Disclaimer on 7/20/05 are acknowledged. In response to said papers submitted, previous 112 rejection, drawing objection, 103 and double patenting rejection based on US 6,596,831 and US 6,525,155 are hereby withdrawn. Furthermore, the 103 rejection over Locquenghien et al. (US-074 or US-439) in view of Bonsignore et al. (US-238) is withdrawn, because of the newly amended "wherein the subunits forming the resultant polymer are predominately dicarboxylic subunits" exclude primary references 10-30 wt% carboxylic acid.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 23 and claims dependent thereon are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The examiner fails to find expressive support for fertilizer "being in intimate contact with" with a substantially water-soluble dicarboxylic acid polymer/composition" in applicant's disclosure.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 23 and claims dependent thereon are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The examiner fails to find the specific definition in applicant's specification for fertilizer "being in intimate contact with" with a substantially water-soluble dicarboxylic acid polymer/composition". What are the metes and bounds of "intimate contact"?

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-11, 23-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al. (US-629) in view of Bonsignore et al. (US-238).

US 3,265,629 to Jensen et al. discloses a method of coating solid particles, including fertilizer species expressed in the present claims (col. 2, lines 36-42); col. 11, Example 7). Prior art discloses particle size range which meets the requirement expressed in claims 4, 26 (col. 2, lines 5-12). Suitable coating employed includes aqueous solution of polymers containing both lipophilic and

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hydrophilic units, with the major percentage of the recurring units being hydrophilic (i.e. derived from dicarboxylic acids such as maleic acid and crotonic acid). Thus, water solubility is expected to be substantial as prior art uses a major percentage of hydrophilic monomers, and as further evident in using aqueous solution of the polymer coating. Other copolymerized units such as the instant itaconic acid, are also taught in minor amounts (col. 5, lines 57-72; col. 6, lines 5-12). Hence, the instant substantially water-soluble dicarboxylic acid polymer is suggested. The substantially water solubility of the resulting dicarboxylic polymer would be an inherent characteristic as the same monomeric units are used. In a preferred embodiment, the reference teaches hydrolyzed styrene-maleic anhydride copolymer containing a minor amount of other comonomer such as itaconic acid, which encompass the instantly recited "at least two different moieties" and the first and second reactants. Prior art further suggest experimental control of the resultant polymer solubility via inclusion of suitable solubilizing agent (col. 6, lines 13-37). Hence, the degree of water solubility can be adjusted by one skilled in the art as taught. It is noted that even if the recited "being in

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intimate contact" is supported in applicant's disclosure (i.e. barring the 112 issues), prior art's inclusion of a lipid layer would still fall within the scope of "intimate contact" with a composition comprising a substantially water-soluble dicarboxylic acid polymer, taken its broadest interpretation. Prior art appears to be silent regarding the proportions of polymer and fertilizer and relative amount of coating as expressed in claims 5, 10, 27, and 32. The examiner is of the position that under prior art general conditions, one skilled in the art would have envisaged the proper proportions suitable for specific applications via routine experimentation. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. The reference does not expressly exemplify dust inhibition property attributed to the coating, but does disclose slow release/extended action of the coated fertilizer. This would implicitly suggest dust generation is expected to be reduced, absent evidence of the contrary. Accordingly, since the reference discloses a method of coating fertilizer employing a polymer comprising a major amount of hydrophilic monomers (i.e. maleic acid/anhydride, crotonic acid) and a minor amount of comonomers (i.e. itaconic

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acid), this teaching makes the selection of at least two dicarboxylic monomers would be obvious and readily envisaged by one having ordinary skill in the art, motivated by the reasonable expectation of success in forming a coated fertilizer product as taught. Primary reference is silent regarding using the polymer in granular form or co-ground the polymer and fertilizer together as claimed. The examiner is of the position that the polymer can be produced in granular form and the subsequent procedure of co-grounding said polymer with coated and/or non-coated fertilizer is conventional practice to one skilled in the art as expressly taught in analogous U.S. 5,563,238 to Bonsignore et al. Accordingly, it would have been obvious to one skilled in the art to admixed the polymer with fertilizers and subsequently co-ground the admixture with the reasonable expectation of success in controlling the release rate of the fertilizer into the agricultural site as taught in the prior art. Thus, rendering obvious the instant claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).



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Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

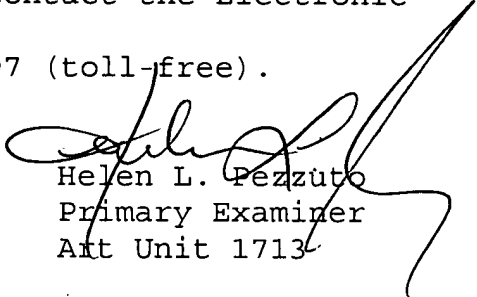
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen L. Pezzuto  
Primary Examiner  
Art Unit 1713

hlp